

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

2282
3
UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON 25, D. C.

In cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JUNE 25, 1948

(Sixth Cotton Insect Survey Report for 1948)

No widespread serious outbreaks of insects attacking cotton have developed thus far during 1948. Reports have been received from many localities indicating that serious damage has been caused in limited areas by the boll weevil, cotton fleahopper, tarnished plant bug, beet armyworm, bollworm, grasshoppers, thrips, red spiders, aphids and other pests. Insecticides have been used effectively for the control of these and other insects but there have been no really alarming outbreaks that could not be checked promptly by the proper application of insecticides. If cotton insect infestations do not increase considerably during July and August, there is every prospect that 1948 will be a year of comparatively light insect damage. However, July and August are the critical months for cotton insects and their control. With favorable weather conditions any or all of the pests mentioned might cause enormous losses over wide areas during July and August, if insecticides are not properly used.

The cotton leafworm has appeared in Refugio and Hidalgo Counties, Texas.

Insecticides have been used extensively for cotton insect control during June in Arizona, California, Louisiana, South Carolina and Texas. In some areas insecticides have been wasted because farmers have used them when injurious insects were not abundant enough in the fields to justify their use.

During July each cotton field should be carefully examined at least once each week to note the presence and abundance of the various cotton insects and to determine if insecticides are needed.

No actual shortages of insecticides for cotton insect control have been reported. July and August are the months when insecticide shortages have occurred most frequently in previous years.

BOLL WEEVIL

TEXAS: Continued hot, dry weather is causing cotton to open prematurely in many southern areas and is aiding in insect control. Cotton picking and ginning are becoming general in the Lower Valley. A high percentage of the cotton acreage has been dusted in the Wharton, Port Lavaca, and Victoria areas and in Nueces and San Patricio Counties. In most instances cotton in the dusted fields is well fruited and the final production will depend upon whether sufficient rains fall within the next few days.

The average boll weevil infestation in 705 fields in 52 counties generally distributed throughout the State was 13%. No weevils were found in 147 of the fields examined. In 295 fields 10% or less of the squares were punctured; in 153 fields from 11 to 25%; in 76 fields from 26 to 50%; and in 34 fields more than 50% of the squares were punctured.

OKLAHOMA: The cotton insect survey was started on June 21, but due to unusually heavy rains in many areas only a limited number of fields were inspected during the week. Plant examinations were made in 8 fields in Pattawatomie and Seminole

Counties where the plants were not large enough to make square counts and weevils were found at an average rate of 44 per acre. No weevils were found in 12 fields examined in Logan and Grady Counties. The average infestation in 38 fields in 8 counties in the southern portion of the State was 17% punctured squares. No infestation was found in 3 fields in Stephens County. In 6 fields less than 10% of the squares were punctured; in 5 fields from 11 to 25%; in 4 fields from 26 to 50%; and in 2 fields in Choctaw and McCurtain Counties more than 50% of the squares were punctured.

LOUISIANA: Boll weevil infestation counts made in 284 cotton fields in 20 parishes averaged 6% punctured squares. No infestation was found in 65 of the fields examined. In 165 fields 10% or less of the squares were punctured; in 42 fields from 11 to 25%; in 8 fields from 26 to 50%; and in 4 fields in Madison, Natchitoches and St. Landry Parishes more than 50% of the squares were punctured.

No boll weevils have emerged from the hibernation cages at Tallulah since the week ending June 4, indicating that emergence is completed. The survival of weevils in the hibernation cages at Tallulah from May 1 to June 25 as compared to past years is as follows:

<u>Year</u>	<u>Survival, Percent</u>	<u>Year</u>	<u>Survival, Percent</u>
1948	.38	1939	1.94 *
1947	1.76	1938	.76 *
1946	9.10	1937	17.74
1945	14.62	1936	.12 *
1944	2.16	1935	.48 *
1943	.94	1934	4.24 *
1942	.08 *	1933	.42
1941	16.44	1932	13.60
1940	.02 *		

* Emergence completed

Hot, dry weather was unfavorable for weevil development during the week throughout the State but favorable for cotton growth. Dr. L. D. Newsom, Assistant Entomologist, Agricultural Experiment Station, Baton Rouge, reported that in examining 393 cotton squares collected in Northwest Louisiana he found an average of 40% of the weevil stages alive and 60% dead.

ARKANSAS: In the examination of 9,600 cotton plants in 32 fields in 6 southeastern counties boll weevils were found at an average rate of 15 per acre as compared to 155 a year ago in this area.

Infestation counts made in 20 fields in Chicot, Ashley and Desha Counties averaged 6% punctured squares. No infestation was found in 4 fields. In 11 fields 10% or less of the squares were punctured and in 4 fields in Chicot and one field in Desha Counties from 11 to 25% of the squares were punctured. Weather conditions continued unfavorable for weevil development.

MISSISSIPPI: No boll weevils were found on 277 of the 472 farms examined in 51 counties during the week ending June 25. However, the boll weevils are gradually increasing in numbers as the finding of weevils in 195 fields or 41% of the fields examined compares with 36% the previous week. The average infestation in the infested fields was 13% which compares to 10% a week ago.

and 24% at this time last year. Most of the fields still free of weevils are in the Delta and northern counties. Fields with infestations varying from 35 to 95% punctured squares were reported from Attala, Chickasaw, Choctaw, Clay, Jones, Lauderdale, Monroe, Warren, Winston, and Yazoo Counties. Not only are there high infestations in some counties but in many of the hill counties weevils were found in every field examined. This was the case in Attala, Calhoun, Chickasaw, Choctaw, Clarke, Clay, Copiah, Jasper, Jefferson, Jones, Lamar, Lauderdale, Lincoln, Oktibbeha, Pearl River, Pike, Wayne, Webster and Winston Counties.

Of the 472 fields examined in Mississippi, 296 were on Delta farms. No weevils were found in 228 of these Delta fields and 40 of the 68 infested Delta fields are in Issaquena, Warren and Yazoo Counties. The highest infestation reported in the Delta was 46% punctured squares on a farm in Yazoo County. Weevils were found on Delta farms in 13 of the 19 counties where examinations were made as compared to 7 of the 17 counties examined last week. The percent of total infested fields was slightly higher than last week and there was also a slight increase in the percent infestation in all infested fields - 10.7% this week as compared to 9.6% last week. Emergence of the ^{first} boll weevils from early squares started last week in the Southern Delta Counties.

GEORGIA: The boll weevil situation continues favorable for the cotton growers generally. Scattered thundershowers over most of the State have prevented the high temperatures from being fully effective in controlling the boll weevil. In the examination of 117 fields located in 31 counties the highest infestation was in a field in Barrow County where 29% of the squares were punctured. In only 9 other fields did the percentage of infested squares exceed 10%. These fields are located in Hart, Morgan, Newton, Walton, Carroll, Schley, and Taylor Counties. Although boll weevils or punctured squares were found in most of the cotton fields the infestations did not exceed 10% punctured squares in 96 of the fields that were examined. Although boll weevil infested cotton fields were found in all of the 31 counties where examinations were made, there were 9 fields in Carroll, Colquitt, Tifton, Lowndes, Randolph, Sumter, Taylor, Wilcox and Worth Counties in which no boll weevils or punctured squares were found. In general, the boll weevil infestations are higher in the northern than in the southern counties.

SOUTH CAROLINA: Weather was favorable for cotton growth and the crop is making good progress. Cotton in the Piedmont area was not large enough for square examinations. In the southern and eastern counties, cotton was blooming freely and is a week or ten days earlier than last year. The highest temperatures of the year prevailed during the week and some immature boll weevils were killed in squares.

Boll weevils are continuing to emerge from hibernation, but at a reduced rate, as only 33 were collected from the trap plot at Florence as compared to 50 last week and 90 the week before last. The collections in the trap plot through June 25 as compared to other years are as follows:

<u>Year</u>	<u>Weevils Collected</u>	<u>Year</u>	<u>Weevils Collected</u>
1948	418	1943	518
1947	1046	1942	545
1946	365	1941	1115
1945	562	1940	55
1944	150	1939	741
		1938	380

In Florence County 17 fields that had not been poisoned averaged 10% punctured squares as compared to 3% punctured squares in 43 poisoned fields.

The average square infestation in 68 fields in 14 counties was 13% punctured squares as compared to 16% the previous week. The slight decrease in infestation was partly due to a rapid increase in squares. Weevil infestation was found in all of the 68 fields examined. In 21 fields 10% or less of the squares were punctured; in 41 fields from 11 to 25%; and in 6 fields in Orangeburg, Aiken, Edgefields, Lexington, and Richland Counties more than 26% of the squares were punctured.

NORTH CAROLINA: Hot, dry weather has helped greatly in reducing the boll weevil populations. The low early season weevil infestations and weather conditions have made the boll weevil situation very favorable for the cotton growers. J. T. Conner, Jr., Extension Entomologist, reported that the temperature at Raleigh reached 100°Fahrenheit on June 24. Boll weevil punctured squares were found in 54 of the 60 fields examined in 12 counties. No field had 25% of the squares punctured. In only 8 fields in Cumberland, Hoke, Sampson, Wayne and Greene Counties were as many as 10% of the squares punctured. In 46 fields less than 10% of the squares were punctured; and in 6 fields in Wake, Hoke, Sampson, Pitt, Edgecombe and Nash Counties no weevil infested squares were found. Mr. Conner states: "The average infestation for the State this week was 4.9% punctured squares as compared to 7.2% the last week. "Continued hot, dry weather should aid materially in reducing the damage by boll weevils. Farmers are still urged to begin their dusting when 10% or more of the squares on the plant are found to be punctured."

COTTON FLEAHOPPER, TARNISHED PLANT BUG,
RAPID PLANT BUG AND OTHER MIRIDAE

TEXAS: There was a general reduction in cotton fleahopper infestation during the week. The average in 597 fields in 52 counties was 8 per 100 terminals as compared to 10 last week and 14 a year ago.

LOUISIANA: Sweepings made in 30 fields in Madison Parish averaged 28 tarnished plant bugs per 100 sweeps, ranging from 5 to 64 per 100 sweeps. Dr. L. D. Newson, Assistant Entomologist, Agricultural Experiment Station, Baton Rouge, reported:

"Tarnished plant bugs continue to persist in many fields in this area (northwest Louisiana). A few nymphs have appeared in the majority of infested fields. The adults are apparently responsible for the shedding of a considerable number of small bolls, and seemingly prefer bolls to squares where bolls have developed."

MISSISSIPPI: The tarnished plant bug was observed in 128 of the 296 fields examined in the Delta. In several fields in Bolivar and Washington counties where sweepings were made with the net, the number of tarnished plant bugs collected ranged from 20 to 73 per 100 sweeps. The rapid plant bug was found in 30 fields and the cotton fleahopper in 4 fields but in no case was damage noted. One report was received that approximately 800 acres had been treated with sulfur at the rate of 10 pounds per acre to control the cotton fleahopper. It is thought probable that in this case the insects were not numerous enough to warrant control measures.

COTTON LEAFWORM

TEXAS: The second cotton leafworm reported this year was on June 23 near Alamo, Hidalgo County, by L. F. Green. The first leafworm was found on June 20 in Refugio County, also by L. F. Greer.

MISCELLANEOUS INSECTS

TEXAS: Grasshoppers continue to do considerable damage to marginal edges of cotton fields and other crops in central and north central areas.

OKLAHOMA: On June 26, C. F. Stiles, Extension Entomologist wrote:

"Grasshoppers are causing considerable damage to young cotton in some sections of the State. We have the heaviest grasshopper infestation since 1940 and the infestation seems to be quite general."

MISSISSIPPI: Dr. Clay Lyle reported on June 28 that a few complaints of grasshoppers have been received from Delta Counties and from Simpson and Jefferson Davis Counties from the southern part of the State. B. J. Young, Scott, Bolivar County, writes: "Grasshoppers are doing some damage and will be poisoned."

ARKANSAS: Dr. Charles Lincoln, Extension Entomologist, wrote on June 25 regarding a wooly bear caterpillar on cotton as follows:

"There have been scattered local outbreaks of a large grayish-brown hairy caterpillar. It is one of the wooly bears and is a fairly close relative of the salt marsh caterpillar. They develop on weeds and then move to cotton and other crops. Outbreaks of these caterpillars are so unusual that control measures were not known. None of the dusts tried proved to be of any great value. One County Agent reported good results with poison bait."

GEORGIA: Lepidopterous larvae or "worms" have been unusually abundant on cotton during June in southwestern Georgia. It is hoped that many of the "bollworms" in that area will be collected and sent in for determination. In the report for the week ending June 18 mention was made that the cotton square borer, Strymon melinus (Hbn.) and the tobacco budworm, Heliothis virescens (F.) were causing serious damage in cotton fields in Baker and Mitchell Counties. It is probable that several other species of insects that feed upon the squares and bolls of cotton are involved in these reports concerning bollworm damage in Georgia. Cotton growers, county agents, and others who have opportunity to collect specimens in cotton fields should cooperate in sending specimens in for identification.

INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

ARIZONA: Sweepings made in 39 fields in the more important cotton areas of the Salt River Valley showed a slight increase in mirid populations (principally Lygus spp.) during the week but they are lower than a year ago. Several cotton fields in the Scottsdale and Chandler areas were dusted or sprayed during the week. Several large cotton fields in the Marinette area are heavily infested with the cotton leaf perforator, Bucculatrix thurberiella Busck.

Cotton in the Marana area of the Santa Cruz Valley is progressing satisfactorily and is beginning to set squares. The hemipterous insect populations remain low. The Cortaro Farms Company are dusting several thousand acres of cotton the second time for beet armyworm control. Four dusting planes are being used, but due to unfavorable weather conditions during the past week only a small percentage of the acreage was dusted.

K. K. Henness, County Agricultural Agent, Pinal County, Casa Grande area reported:

"In most fields swept last week the injurious sucking insects were below 6 per 100 net strokes. Beet armyworms were still present in some fields especially in the Stanfield area".

NEW MEXICO: W. B. Rogers, reports from the Pecos Valley: "Injurious sucking insect populations are still very low and the infestations very spotted. Some dusting is in progress. Light bollworm infestations were noted in a few fields."

PREPARED JULY 1, 1948

